

SUVA SANGAM COLLEGE

YEAR 11

APPLIED MATHEMATICS

WORKSHEET 1

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| Strand 1 | Basic Mathematics |
| Sub-Strand | Basic Number Theory and Order of Operation. |
| Content Learning Outcome | Study and use the properties of binary operation. |
| Reference from Text | Pg 1 - 11 |

Questions

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| | CONCEPT IN BRIEF: A binary operation combine two elements from a set to give a third element. Example of other defined operation: $a \# b = 2a - b$ |
| 1 | If $a \# b = 2a - b$, evaluate: (a) $-2 \# -4$ (b) $1 \# -3$ |
| | CONCEPT IN BRIEF: $a * e = a$, where e is the identity element. $a * a^{-1} = e$, where a^{-1} is the inverse of a . |
| 2 | If $p * q = r$ and $q * r = q$: (a) Identify the identity element (b) What is the inverse of p? |
| | CONCEPT IN BRIEF: To evaluate mathematical statement which has two or more operations, the order of operation needs to be followed. Order of Operation: BEDMAS (B racket, E xponent, D ivision, M ultiplication, A ddition, S ubtraction) |
| 3 | Evaluate: $(2 - 7)^2 + 2 \times -4 \div 2$ |